ABSTRACT

Effective fillability and the uniformity electrodeposition of a copper electroplating solution is judged by determining the time-dependent potential change thereof at a cathode current density of $0.1 - 20 \, A/dm^2$. The potential change is determined at a working electrode rotation of $100 - 7500$ rpm, and the fillability with the solution is judged from the curve profile. The time-dependent potential change curve within a predetermined period of time after the start of electrolysis is approximated according to the Boltzmann's function, and the potential change speed dx and the potential convergent point A_2 are obtained to judge the fillability with a plating solution.